

AMENDMENTS TO THE CLAIMS

The following is a complete, marked-up listing of revised claims with a status identifier in parenthesis, underlined text indicating insertions, and strike through and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1. (Previously Presented) Method for providing a shaped biodegradable elastomeric structure, comprising:

forming at least one of homopolymers and copolymers of 1,3-trimethylene carbonate (TMC) into a desired shape; and

irradiating said desired shape with actinic radiation in an inert atmosphere for crosslinking.

2. (Previously Presented) Method according to claim 1, wherein the at least one of the homopolymer and copolymer of 1,3-trimethylene carbonate (TMC) includes a number average molecular weight (M_n) greater than 10,000.

3. (Previously Presented) Method according to claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is chosen from the group consisting of 1,3-trimethylene carbonate (TMC) (co)polymers with lactones, cyclic carbonates, cyclic ethers, cyclic anhydrides, and cyclic depsipeptides.

4. (Previously Presented) Method according to claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is chosen from the group consisting of a statistical copolymer, a random copolymer, an alternating copolymer, a block polymer, a diblock copolymer, a triblock copolymer, a multiblock copolymer, a star-shaped block copolymer, and a graft block copolymer.

5. (Previously Presented) Method according to claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is chosen from the group consisting of 1,3-trimethylene carbonate (TMC) (co)polymers with polyethylene oxide (PEO), polyethylene glycol (PEG) and ϵ -caprolactone (CL).

6. (Previously Presented) Method according to claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is chosen from the group consisting of 1,3-trimethylene carbonate (TMC) (co)polymers with ϵ -valerolacton, 1,5-dioxepane-2-one, and ϵ -caprolactone.

7. (Previously Presented) Method according to claim 1, wherein the copolymer of 1,3-trimethylene carbonate (TMC) is poly(1,3-trimethylene carbonate-co- ϵ -caprolactone) (poly(TMC-CL)).

8. (Previously Presented) Method according to claim 1, wherein the actinic radiation is chosen from the group consisting of gamma radiation, high-energy UV radiation and electron radiation, preferably gamma radiation.

9. (Previously Presented) Method according to claim 1, wherein the actinic radiation is gamma radiation and the irradiation dosage is 5-100 kGy.

10. (Previously Presented) Method according to claim 1, wherein the inert atmosphere is obtained by use of a reduced pressure of less than 10^4 Pa.

11. (Previously Presented) Method according to claim 1, wherein the inert atmosphere is obtained by use of an inert gas.

12. (Previously Presented) Method according to claim 1, wherein a creep rate of the provided shaped biodegradable elastomeric structure is less than 10% of the yield stress.

13. (Previously Presented) Method according to claim 1, wherein a degree of swelling of the provided shaped biodegradable elastomeric structure is less than 400% in chloroform.

14. (Previously Presented) Method according to claim 1, wherein a gel fraction of the provided shaped biodegradable elastomeric structure is more than 10% by weight.

15. (Previously Presented) Method according to claim 1, further comprising sterilizing the provided shaped biodegradable elastomeric structure.

16. (Previously Presented) Shaped biodegradable elastomeric structure obtainable by a method according to claim 1.

17. (Previously Presented) A method, comprising:
using a shaped biodegradable elastomeric structure according to claim 16 in or as at least one of an implant, a matrix and a support device.

18. (Previously Presented) A medical implant, comprising:
a shaped biodegradable elastomeric structure according to claim 16.

19. (Previously Presented) Method according to claim 1, wherein the at least one of the homopolymer and copolymer of 1,3-trimethylene carbonate (TMC) includes a number average molecular weight (M_n) between 10,000 to 300,000.

20. (Previously Presented) Method according to claim 1, wherein the at least one of the homopolymer and copolymer of 1,3-trimethylene carbonate (TMC) includes a number average molecular weight (M_n) between 50,000 to 200,000.

21. (Previously Presented) Method according to claim 1, wherein the actinic radiation is gamma radiation and the irradiation dosage is 10-45 kGy.

22. (Previously Presented) Method according to claim 1, wherein the sterilizing of the provided shaped biodegradable elastomeric structure is done in an autoclave.

23. (Previously Presented) A matrix, comprising:
a shaped biodegradable elastomeric structure according to claim 16.

24. (Previously Presented) A support device, comprising:
a shaped biodegradable elastomeric structure according to claim 16.